

LISTING OF THE CLAIMS:

1 - 9. (Canceled)

10. (Currently Amended) A method of manufacturing fuel cell bipolar plates, comprising the steps of:

forming using a wet-lay process a composite material comprising graphite particles, thermoplastic polymer, and reinforcing fibers, wherein the bulk conductivity is at least 150 S/cm; and

molding said composite material to form bipolar plates.

11. (Original) The method of claim 10 wherein said molding step is performed by compression molding.

12. (Original) The method of claim 10 wherein said forming step includes the steps of:

forming a plurality of sheets from graphite particles, thermoplastic fibers and reinforcing fibers using a wet-lay process;

consolidating a stack of said plurality of sheets;

obtaining a blank from a consolidated stack, wherein said blank is used in said molding step.

13. (Original) The method of claim 10 wherein said reinforcing fibers are selected from the group consisting of carbon and glass.

14. (Original) The method of claim 10 wherein said molding step introduces at least one feature into said bipolar plates.

15. (Original) The method of claim 14 wherein said at least one feature is a gas

flow channel.

16. (Original) The method of claim 10 wherein said forming step includes the steps of:

forming a plurality of formable sheets by a wet lay process; and
stacking said plurality of sheets in a mold.

17. (Original) The method of claim 16 further comprising depositing a second polymer different from said thermoplastic polymer on a top and bottom of said stack.

18. (Original) The method of claim 16 further comprising adding graphite particles to said stack.

19. (Currently Amended) The method of claim 10 wherein said forming and molding step occur simultaneously or sequentially.

20. (Original) The method of claim 10 wherein said composite material produced in said forming step includes a first polymer in a core of said composite material and a second polymer, different from said first polymer, on a surface of said core.

21. (New) The method of claim 10, wherein the graphite particles are in an amount of at least 50 wt%.

22. (New) The method of claim 10, wherein the graphite particles are in an amount of at least 65 wt%.